ORIGINAL

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF TEXAS
DALLAS DIVISION

SBC TECHNOLOGY RESOURCES, INC.,	
Plaintiff,	
vs.	**HONORABLE David C. Godbey**
INRANGE TECHNOLOGIES CORP., ECLIPSYS CORP., and RESOURCE BANCSHARES MORTGAGE GROUP, INC.,	**CIVIL ACTION NO. 3:03-CV-418-N**
Defendants.	

SBC TECHNOLOGY RESOURCES, INC.'S CLAIM CONSTRUCTION REPLY BRIEF

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I. INTRODUCTION

Based on Inrange's pre-briefing position that this Court had to construe nineteen claim terms, SBC stated on page 2 of its opening claim construction brief: "Defendants' transparent goal with their proposed 'construction' is to have this Court rewrite the claims." Inrange still seeks construction of numerous terms (nine) and its goal remains the same — rewrite the claims.

Inrange's on-going claim rewrite strategy is revealed most clearly in its requested "construction" of the term "programmable storage controller," which Inrange suggests is the key term in this case. Rather than trying this term as written, Inrange asks this Court to "construe" the term with the following **seventy** words:

> The logic control system, implemented in programmable computer software and corresponding configured hardware, that receives channel commands from a host computer and ensures the specified delivery, storage, and retrieval actions, by translating those channel commands of the host into the instructions and addressing scheme understood and carried out by the targeted storage facility(ies) under its control, thereby shielding the host computer from the operational complexity of the targeted storage facility(ies).
>
> (Inrange Brief, p. 20.)

This is not a construction, it is a blatant rewrite of the claim, and Inrange employs this claim rewrite strategy elsewhere. In a consistent pattern, Inrange repeatedly cites an ordinary meaning and then adds limitations or changes the ordinary meaning to reach its proposed "construction."

Inrange does not contend that any of SBC's proposed constructions are inaccurate; it argues they are "incomplete." Again, this argument reveals Inrange's claim

rewrite strategy. If SBC's construction is accurate, there is no legal basis for adding limitations not found in the claims.

Although Inrange correctly points out in its response that the Federal Circuit is currently considering several claim construction principles *en banc*, the fundamental principle that "Courts do not rewrite claims" is not in play. *Resonate, Inc. v. Alteon Websystems, Inc.*, 338 F.3d 1360, 1365 (Fed. Cir. 2003), quoting *K-2 Corp. v. Salomon S.A.*, 191 F.3d 1356, 1364 (Fed. Cir. 1999).

To the extent this Court considers claim construction before the Federal Circuit's *en banc* decision,[1] it should reject Inrange's claim rewrite strategy and construe the claim terms as proposed by SBC.

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[1]To the extent the Court wishes to defer claim construction until the Federal Circuit's decision, SBC does not object. Construing the claims in a vacuum, unconnected to any infringement or invalidity issue, creates a risk that the words chosen for the Court's construction will be the subject of later disputes, and hence require re-interpretation later in the case. The Federal Circuit's pending *en banc* review heightens that risk here.

Ironically, Inrange urged early claim construction, but now states: "[t]his is not an opportune time to be construing litigated patents." (Inrange Brief, p. 12, n. 8.)

II. REPLY

As in its opening claim construction brief, SBC sets out each portion of claim 1 in a separate section below. SBC addresses in this Reply only the claim terms for which Inrange is still pursuing a construction. SBC does not separately address method claim 34 because all claim construction issues relating to claim 34 are addressed in the context of claim 1.

SBC concludes each section with a table summarizing the parties' positions on disputed claim terms, and the reasons why SBC's positions are correct.

A. A Storage Control Subsystem Connected Between One Or More Storage Controller Channels Of At Least One Host System And Data Storage Facilities Comprising A Plurality Of Target Units, Said Storage Control Subsystem Comprising:

Although Inrange raised several preamble terms in correspondence among counsel, it raises only "target units" in its claim construction brief, and only to acknowledge that the parties agree that "target units" refer to storage devices. (Inrange Brief, p. 35.)

B. A Programmable Storage Controller That Emulates A Plurality Of Types Of Target Unit Specific Storage Controllers, Said Programmable Storage Controller Being Implemented With An Application Program And A Computer, Said Computer Being Configured By Said Application Program

In this portion of Claim 1, Inrange asks this Court to construe: "programmable storage controller"; "computer"; and "application program."

1. **Programmable Storage Controller**

Inrange's 70-word "construction" of programmable storage controller, quoted on page 1 of this Reply, is improper on its face. Inserting Inrange's "construction" into claim 1 manufactures a dramatically different claim:

> 1. A storage control subsystem connected between one or more storage controller channels of at least one host system and data storage facilities comprising a plurality of target units, said storage control subsystem comprising:
>
> a **logic control system, implemented in programmable computer software and corresponding configured hardware, that receives channel commands from a host computer and ensures the specified delivery, storage, and retrieval actions, by translating those channel commands of the host into the instructions and addressing scheme understood and carried out by the targeted storage facility(ies) under its control, thereby shielding the host computer from the operational complexity of the targeted storage facility(ies)** that emulates a plurality of types of target unit specific storage controllers, said **logic control system, implemented in programmable computer software and corresponding configured hardware, that receives channel commands from a host computer and ensures the specified delivery, storage, and retrieval actions, by translating those channel commands of the host into the instructions and addressing scheme understood and carried out by the targeted storage facility(ies) under its control, thereby shielding the host computer from the operational complexity of the targeted storage facility(ies)** being implemented with an application program and a computer, said computer being configured by said application program;
>
> a first interface for interfacing a plurality of channel adapters which carry a plurality of channel programs transmitted from the channels of the host system to said **logic control system, implemented in programmable computer software and corresponding configured hardware, that receives channel commands from a host computer and ensures the specified delivery, storage, and retrieval actions, by translating those channel commands of the host into the instructions and addressing scheme understood and carried out by the targeted storage facility(ies) under its control, thereby shielding the host computer from the operational complexity of the targeted storage facility(ies)**, each channel

program having means for carrying data, status information and commands; and

a second interface for interfacing said **logic control system, implemented in programmable computer software and corresponding configured hardware, that receives channel commands from a host computer and ensures the specified delivery, storage, and retrieval actions, by translating those channel commands of the host into the instructions and addressing scheme understood and carried out by the targeted storage facility(ies) under its control, thereby shielding the host computer from the operational complexity of the targeted storage facility(ies)** to said target units;

said **logic control system, implemented in programmable computer software and corresponding configured hardware, that receives channel commands from a host computer and ensures the specified delivery, storage, and retrieval actions, by translating those channel commands of the host into the instructions and addressing scheme understood and carried out by the targeted storage facility(ies) under its control, thereby shielding the host computer from the operational complexity of the targeted storage facility(ies)** comprising a plurality of controller emulators, said controller emulators comprising means for translating said channel programs and commands from a channel specific format to a generic format of said **logic control system, implemented in programmable computer software and corresponding configured hardware, that receives channel commands from a host computer and ensures the specified delivery, storage, and retrieval actions, by translating those channel commands of the host into the instructions and addressing scheme understood and carried out by the targeted storage facility(ies) under its control, thereby shielding the host computer from the operational complexity of the targeted storage facility(ies)** that includes generic address and request information, to thereby facilitate data and status command exchanges with said plurality of target units.

Inrange's proposed construction of "programmable storage controller" includes the word "programmable," so sixty-nine of its seventy words construe only "storage controller." Inrange does not cite and SBC does not know of any court that has "construed"

two words with sixty-nine. Nor is there any reason to do so. The words storage controller require minimal, if any construction. By their plain meaning, they describe something that controls or participates in the control of storage in some way.

Inrange's 70-word "construction" may arise from the fact Inrange's marketing literature emphasizes that the accused FC-9000 product controls storage:

- "All FC/9000 director and switches feature the IV-VSN Enterprise Manager software, giving you a single point of control for managing and monitoring your storage network resources." (Exhibit E, p. 4.)
- "the FC/9000 provides IT professionals with the most scalable technology for controlling server/storage connectivity and simplifying enterprise SAN management." (Exhibit F.)

Indeed, Inrange indicates on page 2 of its Brief that it believes the construction of programmable storage controller is the key to this case: "The dispute here boils down to this: SBC seeks to have the claims of this programmable storage controller patent construed to cover the Inrange FC/9000 Fibre Channel Switch."

Whatever its motivation, Inrange cannot defend its unprecedented 70-word "construction." On pages 18-20 of its brief, Inrange purports to tell this Court what "the allowed claims of the '845 patent" (emphasis added) require regarding the "programmable storage controller." In fact, Inrange cites only the patent specification — **fifteen times**. The Federal Circuit has repeatedly criticized those who advocate importing even a single limitation from the specification, yet Inrange wants to import fifteen. As the Federal Circuit has stated:

> the written description is not a substitute for, nor can it be used to rewrite, the chosen claim language. Though understanding the claim language may be aided by the explanations contained in the written description, it is important not to import into a claim limitations that are not a part of the claim.

Resonate, 338 F.3d at 1364. *See also, e.g., Metabolite Laboratories, Inc. v. Laboratory Corp. of America Holdings,* 370 F.3d 1354, 1363 (Fed. Cir. 2004); *Superguide Corp. v. DirecTV Enterprises, Inc.,* 358 F.3d 870, 875 (Fed. Cir. 2004); *Arlington Indus., Inc. v. Bridgeport Fittings, Inc.,* 345 F.3d 1318, 1327 (Fed. Cir. 2003); *RF Delaware, Inc. v. Pacific Keystone Technologies, Inc.,* 326 F.3d 1255, 1262 (Fed. Cir. 2003).

Further, Inrange does not even attempt to tie these fifteen specification cites to its 70-word "construction" — the "construction" is fabricated out of whole cloth. Indeed, Inrange's "construction" is so novel that the construction itself requires interpretation. Inrange's proposed "construction" would introduce a litany of new terms — *e.g.,* logic control system, instructions, addressing scheme, shielding, operational complexity — not found in the claims. What do these terms mean? Will the parties fight about their meanings?

Finally, although Inrange said in the parties' pre-briefing correspondence that "emulate" needs construction, Inrange barely mentions the term in its brief. Inrange admits SBC's proposed construction — accepts the same inputs and produces the same outputs as (but is not itself) the thing emulated — is accurate, but says it is "incomplete." Inrange then tries to import from the specification additional limitations, *e.g.,* "exactly," not found in the claim. Again, Inrange's attempt to narrow these claim terms is improper. "Incomplete" is no excuse to read limitations from the specification into the claims.

This Court should reject Inrange's 70-word "construction" of "programmable storage controller," and either not construe the term or construe it in accordance with the ordinary meaning, *i.e.,* a programmable device that controls an aspect of storage. This Court should also adopt SBC's admittedly accurate construction of "emulate," *i.e.,* accepts the same inputs and produces the same outputs as (but is not itself) the thing emulated.

2. Computer

Regarding "computer," Inrange's attempted rewrite is again blatant. In particular, Inrange wants this Court to rewrite the "computer" in asserted claims 1 and 34 with the term "general purpose computer."

The '845 patent has claims (asserted claims 1 and 34) that require a "computer." The '845 patent expressly defines "computer" as:

> a machine that performs three functions: accepts structured input, processes it according to prescribed rules, and produces the results of the processing as output; examples of computers include super computers, mainframes, super mini computers, mini computers, work stations, personal computers, and microcomputers.
>
> (Col.5, ll.32-37.)

The '845 patent has other claims (unasserted claims 45 and 47) that require a "general purpose computer." The '845 patent expressly defines "general purpose computer" as:

> a computer which is provided with enough facilities to allow it to implement a wide range of different unrelated operating systems and/or applications.
>
> (Col.5, ll.42-47.)

In other words, SBC expressly distinguished between a "computer" and a "general purpose computer." SBC claimed a "computer" when it meant a computer and claimed a "general purpose computer" when it meant a general purpose computer.

Notwithstanding all of these express distinctions within the '845 patent itself, Inrange asks this Court to say that "computer" means: "a computer which is provided with enough facilities to allow it to implement a wide range of different unrelated operating

systems and/or applications," *i.e.,* the patent's definition of "general purpose computer." Again, this is not a construction, it is a rewrite.

Inrange tries to defend the rewrite by citing an Examiner's statement about the claims, but the Examiner was obviously mistaken. Claims 1 and 34 do not require a "general purpose computer," and the language of the claims, not the Examiner's statement, controls. *Rambus Inc. v. Infineon Technologies AG,* 318 F.3d 1081, 1090 (Fed. Cir. 2003); *Intervet America, Inc. v. Kee-Vet Laboratories, Inc.,* 887 F.2d 1050, 1053-54 (Fed. Cir. 1989).

Inrange tries to argue on page 32 that *Rambus & Intervet* do not apply because SBC supposedly disavowed claim scope. Where? SBC never argued that "computer" means "general purpose computer." SBC never argued for any meaning of "computer," let alone a meaning contrary to the express definition set forth in the '845 patent. The SBC arguments concerning "general purpose computer" that Inrange references relate to claims that claimed a general purpose computer. The '845 patent's express definition of "computer" controls. *3M Innovative Properties Co. v. Avery Dennison Corp.,* 350 F.3d 1365, 1371-72 (Fed. Cir. 2003).

Further, "general purpose computer" is now in issued claims 45 and 47, not in claims 1 and 34. In the Federal Circuit's words: "Our court has made clear that when a patent claim 'does not contain a certain limitation and another claim does, that limitation cannot be read into the former claims . . ." *Amgen Inc. v. Hoechst Marion Roussel, Inc.*, 314 F.3d 1313, 1326 (Fed. Cir. 2003).

3. Application Program

SBC construes "application program" as "rules used by a computer to perform an application." As with SBC's construction of "emulate," Inrange does not dispute that SBC's definition is accurate. Repeating its claim rewrite theme, however, Inrange again says that SBC's admittedly accurate definition is "incomplete." Again, Inrange does not cite any legal authority for the proposition that a defendant can artificially restrict an accurate claim construction because it is "incomplete." Again, the additional limitations that Inrange tries to add to SBC's accurate construction are baseless.

Inrange's proposed "complete" construction of "application program" is:

> software code that is compatible with the software operating system configured to run a general purpose computer and that is capable of performing particular applications on the computer without changing the operating system or modifying the hardware configuration.

(Inrange Brief, p. 34, emphasis added.)

Inrange's proposed construction of "application program" is a back-door attempt to read "general purpose computer" into claims 1 and 34 when they expressly require only a "computer." Inrange's back-door claim rewrite gambit should be rejected along with its other claim rewrite gambits.

a **programmable storage controller** that emulates a plurality of types of target unit specific storage controllers, said programmable storage controller being implemented with an **application program** and **a computer**, said computer being configured by said application program		
SBC	**Inrange**	**SBC Is Correct**
"programmable storage controller" need not be construed; its ordinary meaning is a system that is programmable and controls some aspect of storage.	"programmable storage controller" means: "the logic control system, implemented in programmable computer software and corresponding configured hardware, that receives channel commands from a host computer and ensures the specified delivery, storage, and retrieval actions, by translating those channel commands of the host into the instructions and addressing scheme understood and carried out by the targeted storage facility(ies) under its control, thereby shielding the host computer from the operational complexity of the targeted storage facility(ies)."	Perhaps because it views this term "programmable storage controller" as a key to its defense, Inrange blatantly rewrites the term. Inrange has no basis for adding dozens of limitations not found in the claim.
"emulates a plurality of types of target unit specific storage controllers" means accepts the same inputs and produces the same outputs as (but is not itself) a plurality of types of target unit specific storage controllers.	"The emulation here is of 'a plurality of target unit specific storage controller,' so the emulation is context-specific: the system(s) represented are target unit specific storage controllers, so the 'programmable storage controller' must control data (whether on disk or tape) in exactly the same manner as if it were such a target unit specific storage controller."	Inrange does not dispute that SBC's construction of "emulate" is accurate. The claim does not require "exactly." Inrange's attempt to limit SBC's admittedly accurate construction is improper.
a "computer" is a machine that performs three functions: accepts structured input, processes it according to prescribed rules, and produces the results of the processing as output.	a "computer" is "a computer which is provided with enough facilities to allow it to implement a wide range of different unrelated operating systems and/or applications."	The '845 patent expressly defines "computer" and that definition controls.

a **programmable storage controller** that emulates a plurality of types of target unit specific storage controllers, said programmable storage controller being implemented with an **application program** and **a computer**, said computer being configured by said application program		
SBC	**Inrange**	**SBC Is Correct**
"application programs" are rules used by a computer to perform an application	"application programs" are "software code that is compatible with the software operating system configured to run a general purpose computer and that is capable of performing particular applications on the computer without changing the operating system or modifying the hardware configuration."	Again, Inrange does not dispute that SBC's construction is accurate and it has no basis for adding a "general purpose computer" requirement to an accurate interpretation of "application program."

C. A First Interface For Interfacing A Plurality Of Channel Adapters Which Carry A Plurality Of Channel Programs Transmitted From The Channels Of The Host System To Said Programmable Storage Controller, Each Channel Program Having Means For Carrying Data, Status Information And Commands

1. First Interface

Inrange's proposed definition of "first interface" is: "an interface that connects the programmable storage controller to the plurality of channel adapters, where the first interface excludes the host bus adaptor(s)." SBC agrees with the portion of Inrange's construction that is based on the plain meaning, *i.e.*, "an interface that connects the programmable storage controller to the plurality of channel adapters." SBC disagrees with the extraneous limitation, *i.e.*, "where the first interface excludes the host bus adaptor(s)." The sole basis for this additional limitation is Inrange's position that "a channel is not a bus." (Inrange Brief, p. 29.) But, Inrange's own technical dictionary makes it clear that a bus is

a form of a channel: "the bus in a personal computer serves as a common, shared channel between all devices." (Inrange Brief, p. 24, quoting Inrange Exhibit O, emphasis added.)

Inrange's extraneous limitation is improper.

2. Channel Program Having Means For Carrying, Status Information And Commands

Inrange posits that this claim element should be construed under 35 U.S.C. § 112, ¶ 6[2]. Initially, Inrange is definitive: "The structure corresponding to the channel program's means for carrying data, status information and commands is: 'a unique dialect often referred to in the patent as a channel specific format.'" (Inrange Brief, p. 30.) If Inrange construed channel specific format by its plain meaning, *i.e.*, the format (structure or layout of an item or data) used in a specific channel (path or link through which information passes between two devices), SBC would agree with Inrange's initial definitive position that the corresponding structure is a channel specific format.

Inrange goes further, however, quotes a series of excerpts from the specification, and then says vaguely that "the construction of this term should therefore be limited to the corresponding structure cited above, and statutory equivalents thereof." (Inrange Brief, pp. 30-31.) Again, there is no basis for these additional limitations beyond Inrange's initial definitive position.

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[2] 35 U.S.C. § 112, ¶ 6 states:

> An element in a claim for a combination may be expressed as a means or step for performing a specific function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

a first interface for interfacing a plurality of channel adapters which carry a plurality of channel programs transmitted from the channels of the host system to said programmable storage controller, each channel program having **means for carrying data, status information and commands**		
SBC	**Inrange**	**SBC Is Correct**
the "first interface" is an interface that connects the programmable storage controller to the channel adapters (sometimes called host bus adaptors, or HBAs) of a host system.	the first interface is "an interface that connects the programmable storage controller to the plurality of channel adapters, where the first interface excludes the host bus adaptor(s)."	Inrange's additional negative limitation, "where the first interface excludes the host bus adaptor(s)" is improper. The added limitation is based on Inrange's position that "a channel is not a bus," which Inrange's own dictionary contradicts by stating that a bus is a form of a channel.
"means for carrying data, status information and commands" is a format (structure or layout of an item or data), implemented through software, firmware or hardware, used in a specific channel (path or link through which information passes between two devices) and equivalents thereof.	Inrange's proposed construction is unclear. Inrange says that the corresponding structure is a channel specific format, but then quotes a series of excerpts from the specification, and says vaguely that "the construction of this term should therefore be limited to the corresponding structure cited above, and statutory equivalents thereof."	Before adding limitations, Inrange says that "means for carrying data, status information and commands" is a "channel specific format." SBC agrees to the extent the plain meaning of "channel specific format" is used, i.e., that each channel program has a format (structure or layout of an item or data) used in a specific channel (path or link through which information passes between two devices).

D. A Second Interface For Interfacing Said Programmable Storage Controller To Said Target Units

As SBC states in its opening brief, there are no additional disputed terms in this section of Claim 1.

E. Said Programmable Storage Controller Comprising A Plurality Of Controller Emulators, Said Controller Emulators Comprising Means For Translating Said Channel Programs And Commands From A Channel Specific Format To A Generic Format Of Said Programmable Storage Controller That Includes Generic Address and Request Information, To Thereby Facilitate Data And Status Command Exchanges With Said Plurality of Target Units

The next set of claim construction issues raised by Inrange relates to the following claim language: "means for translating said channel programs and commands from a channel specific format to a generic format of said programmable storage controller that includes generic address and request information." Inrange asks this Court to construe the entire clause (a "means-plus-function" clause) and also the following individual words: translating, channel specific format, and generic format.

1. Means For Translating (Whole Clause)

Regarding the clause as a whole, SBC agrees that its construction is governed by 35 U.S.C. § 112, ¶ 6, which states:

> An element in a claim for a combination may be expressed as a means or step for performing a specific function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

In determining corresponding structure, it is improper to "import functional limitations that are not recited in the claim, or structural limitations from the written description that are unnecessary to perform the claimed function." *Omega Engineering, Inc. v. Raytek Corp.*, 334 F3d 1314, 1329 (Fed. Cir. 2003). Yet, in another variant of its claim rewrite strategy, Inrange urges this Court to do just that – incorporate a litany of structures

that do not correspond to the "means for translating." In particular, although the "means for translating" is just one part of the claimed "plurality of controller emulators,"[3] Inrange tries to incorporate all structures relating to these "emulators" — a listing that encompasses an entire page (28) of its brief — not just those corresponding to the means for translating. The "plurality of controller emulators" are not written in "means-plus-function" form, so they are not construed in accordance with 35 U.S.C. § 112, ¶ 6.

As SBC stated in its opening brief, the structure corresponding to the "means for translating" — the means-plus-function language actually at issue — is the portion of the controller emulator (software) described at col. 9, ll.55-66 of the '845 patent. The specification itself states that structure described as being implemented with software can also be implemented with hardware or firmware. (Col. 7, ll. 49-63.)

SBC's proposed construction of the "means for translating" is the only construction consistent with 35 U.S.C. § 112, ¶ 6.

2. Translating

Turning to the specific claim terms raised by Inrange, Inrange offers the following construction for "translating": "the conversion of something from one predefined format to another predefined format." (Inrange Brief, p. 23.) Although SBC does not disagree *per se* with Inrange's construction, SBC believes the "construction" may require more interpretation than the word itself. What does Inrange mean by "predefined" or "conversion"? Will there be a fight among the parties over what those terms mean?

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[3]The claim requires "a plurality of controller emulators, said controller emulators comprising means for translating . . ."

Inrange's proposed construction illustrates how futile claim construction in a vacuum can be. See, *United States Surgical Corp. v. Ethicon Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997) ("The *Markman* decisions do not hold that the trial judge must repeat or restate every claim term in order to comply with the ruling that claim construction is for the court.")

3. Channel Specific Format

In construing "channel specific format," Inrange first states that the meaning of "format" is "the structure or layout of an item or data." Inrange then acknowledges that "the specification defines channel as: 'A path or link through which information passes between two devices; a channel can be either internal or external to a computer.'" (Inrange Brief, p. 23, emphasis added.) From these ordinary meanings, a straightforward claim construction follows: channel specific format is the format (structure or layout of an item or data) used by a specific channel (path or link through which information passes between two devices).

Apparently unsatisfied with the ordinary meaning, Inrange rewrites "channel specific format" as "the command and addressing scheme used by the host computer to communicate over a channel (as opposed to a bus) with the programmable storage controller." (Inrange Brief, p. 23.) This proposed "construction" is untethered to the ordinary meanings cited by Inrange itself. Where does "command and addressing scheme" come from, and what does it mean? Inrange's own dictionary states that a channel can be a bus (see page 12-13, *supra*) contradicting its gratuitous, "(as opposed to a bus)" additional limitation.

Inrange's manufactured limitations are improper. The ordinary and correct meaning of "channel specific format" is: the format (structure or layout of an item or data) used by a specific channel (path or link through which information passes between two devices).

4. Generic Format

Inrange's last term in the claim is "generic format." The claim requires a "generic format of the programmable storage controller that includes generic address and request information." Again Inrange wants to add limitations: "one used internally by the claimed storage controller and includes both a generic request component and a generic addressing component, both of which differ from the addressing and command formats used by the host's channel command of the targeted storage facility." (Inrange Brief, p. 26.)

The claim says nothing of Inrange's surplusage, *i.e.*, "both of which differ from the addressing and command formats used by the host's channel command that targeted the storage facility." By its plain meaning, the generic format requires only a format of the programmable storage controller that includes generic address and request information. No further "construction" is needed.

said programmable storage controller comprising a plurality of controller emulators, said controller emulators comprising **means for translating said channel programs and commands from a channel specific format to a generic format of said programmable storage controller that includes generic address and request information**, to thereby facilitate data and status command exchanges with said plurality of target units		
SBC	**Inrange**	**SBC Is Correct**
The "means for translating" requires software, firmware or hardware that can translate a plurality of channel programs and commands from the format/protocol of a specific channel to a format/protocol of the programmable storage controller that includes generic address and request information, and equivalents thereof.	The "means for translating" requires every structure in the specification that relates in any way to the controller emulator. These numerous alleged corresponding structures are referenced on page 23 of Inrange's Brief and are not reproduced here because they are too numerous to repeat.	Inrange abuses 35 U.S.C. § 112 by trying to incorporate not only the structure corresponding to the "means for translating", but also a litany of additional structures that do not correspond to the "means for translating." Inrange tries to incorporate every structure in the specification that relates in any way to the claimed "plurality of controller emulators," but the "plurality of emulators" are not written in "means-plus-function" form.
"channel specific format" means the format (structure or layout of an item or data) used by a specific channel (path or link through which information passes between two devices).	"channel specific format": "the command and addressing scheme used by the host computer to communicate over a channel (as opposed to a bus) with the programmable storage controller."	This proposed "construction" is untethered to the ordinary meanings of the terms offered by Inrange itself. SBC's construction follows from Inrange's stated meanings of the terms "channel" and "format."
"generic format" means a format of the programmable storage controller that includes generic address and request information.	"generic format" means "one used internally by the claimed storage controller and includes both a generic request component and a generic addressing component, both of which differ from the addressing and command formats used by the host's channel command of the targeted storage facility."	Inrange adds limitations, *e.g.*, "both of which differ from the addressing and command formats used by the host's channel command that targeted the storage facility," found only in the specification and not required by the claims. Inrange's continuing pattern of adding limitations to the claim is improper.

III. CONCLUSION

For the foregoing reasons, this Court should adopt SBC's proposed constructions.

Respectfully submitted,

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Dated: November 17, 2004

CERTIFICATE OF SERVICE

I certify that I served:

SBC TECHNOLOGY RESOURCES, INC.'S
CLAIM CONSTRUCTION REPLY BRIEF

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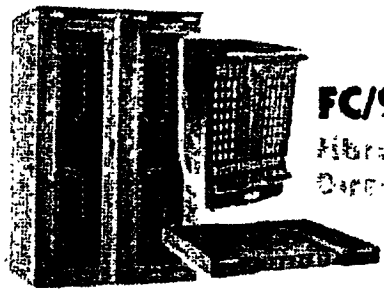
FC/9000 Contact

INRANGE Supported Devices



FC/9000

Fibre Channel Directors and Switches

OVERVIEW

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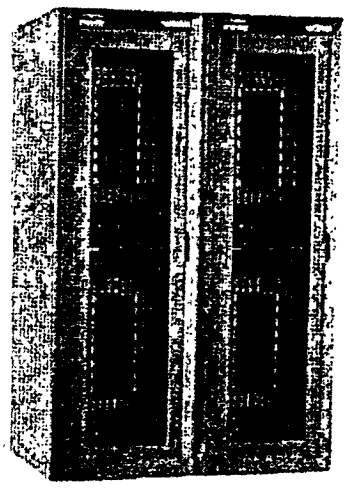
FICON Stu

INRANGE Technologies' family of enterprise class Fibre Channel storage networking directors and switches bring you the speed, reliability, and high availability required for a 24/7/365 world. For enterprises with little or no tolerance for down time, the IN-VSN™ FC/9000™ 64-, 128- and 256-port directors are the only scalable Fibre Channel and FICON™ true directors delivering 99.999% ("Five 9's") availability.



---FC/9000 256-port Director---

The IN-VSN FC/9000 is enhanced by INRANGE's Advanced Storage Networking Services, a comprehensive suite of layered hardware and intelligent software services that extend the network from the core-to-edge-to-anywhere. Advanced Storage Networking Services provides the tools to maximize performance of the network while simplifying storage management, resulting in a lower total cost of ownership.

Advanced Storage Networking Services consists of four feature sets: PerformanceVSN, SecureVSN, ExtendedVSN, and ClearVSN. These feature sets give you more visibility, security, extensibility and control over your entire storage network.

In addition to speed, reliability, and availability, a true enterprise storage-networking director gives you maximum

flexibility and investment protection. One of the key imperatives for enterprises today is the ability to support multiple protocols, interfaces, operating systems, management platforms and topologies. The FC/9000 frees you from interface, operating system, protocol, management software, or topology constraints, maximizing your investment while you scale your storage area network (SAN).

More Flexibility and Investment Protection
With the flexibility of INRANGE's unique XCA™ (Extensible Core Architecture), the FC/9000 enables you to configure your storage network how and where you need. Breaking down the traditional barriers that have confined storage networks within technology and vendor limitations, FC/9000 directors offer industry-leading flexibility to meet your specific business requirements. The FC/9000 gives you multiple options and lets you combine them in the same director without hurting performance.

Some examples of the flexibility and value of the FC/9000:

- FICON and open systems devices can attach to the same director, saving money and giving you more flexibility in managing workloads and devices.
- Fabric and loop are supported with no need for a separate switch, avoiding increased complexity, potential points of failure, and cost.
- Support for multiple media interfaces are on the same director and often on the same blade. Connect what you want, where you want it.
- Support for any combination of switches and directors deployed in local, metro, or remote locations lets you disperse data for disaster recovery applications and gives remote operations access to data stored at corporate.
- In place upgrades of existing technology offer unparalleled investment protection.
- E_port lets you move your installed base to the "edge," while using the FC/9000 as the core of your SAN. This protects any investment in other switches.
- You can manage your SAN with in band management of OS/390 and your choice of best of breed storage management platforms from the leaders in the industry.

The FC/9000 gives you more: more flexibility, more interoperability, and more choice.

Mission-Critical Design
Besides being the most flexible director in the industry, the FC/9000 is an enterprise class director with the full reliability, availability, and serviceability (RAS) that are essential for supporting mission critical environments. It

features data center hardened designs-such as non-disruptive firmware/software upgrades and redundant pathing, control modules, power, and fans-that make them uniquely qualified for use in high-availability applications.

Outstanding Scalability Protects Investment
Scalable from 24 ports to 256 ports and with in-place upgrades and expansion to 2 Gbps, the FC/9000 Fibre Channel director can be used as the backbone or core of a high-speed SAN designed for data intensive, high availability applications such as backup and recovery, business continuance, and data and resource sharing. Via its industry standard (FC-SW-2) open E_port you can deploy existing small directors and switches as edge or departmental switches for distributed needs. With the FC/9000 director as a platform for seamless growth you will have unprecedented scalability that supports rapid expansion without interrupting SAN operation or compromising performance. The FC/9000 enables you to configure your storage network with the types and quantity of ports you need where you need them, when you need them. And its ability to scale on-line and to interoperate with other vendors' switches delivers the ultimate solution for investment protection.

It is INRANGE's XCA that makes it possible for the FC/9000 to expand seamlessly from 24 to 256 ports (as a single domain ID, single switch, and single hop) within the same director to support open systems (FCP) and OS/390 (FICON) environments. XCA reduces the bottlenecks caused by the performance limitations and proprietary trunking of smaller directors and switches to give you maximum flexibility and performance.

Added Value
Not everyone needs a large SAN, and for those environments, the FC/9000 provides an entry place to scale from 24 ports on up. For those environments that do need a large number of ports, or need maximum flexibility for future expansion, the FC/9000 is the versatile solution. But for any environment needing more than a few ports or a couple of small switches, it is important to understand the benefit of a large central core.

Scalable to 256 ports on-line, without disruption and with full bandwidth for all connections and interswitch links (ISLs) or trunks, the FC/9000 director produces a SAN that is easier to configure and manage than a fabric built of many smaller directors/switches. Consider the impact of having to uncable and reconfigure your SAN each time you exceed the port limitation of your director. Adding to or replacing your core director increases downtime, management costs, and complexity, all of which drive up total cost of ownership (TCO). In the small switch

environment, repairing any failure can be disruptive, and each device the data must pass through adds latency. A large, centralized core fabric eliminates the disruptions, management complexity, and reduced performance inherent in a storage network based on many small directors. With the FC/9000 director you can build the most robust and flexible, lowest latency storage network possible today.

Centralized Command and Control
All FC/9000 directors and switches feature the IN-VSN Enterprise Manager software, giving you a single point of control for managing and monitoring your storage network resources. Using in band management, Enterprise Manager makes it easy to configure and monitor the entire SAN, maximizing efficiency and minimizing management costs. For optimum flexibility, Enterprise Manager and ClearVSN (part of INRANGE IN-VSN Advanced Storage Networking Services) combine for industry leading flexibility and clear access to your storage network and existing management tools.

Command of the FC/9000 is also made accessible to our partners' storage management platforms via the IN-VSN Storage Network Application Program Interface (SN-API). SN-API gives our partners, which include BMC, Tivoli, InterSAN, and Veritas, wide-open "clear" access to all of the Enterprise Manager's functionality. This allows you to choose the best-of-breed storage management platform that's right for your environment.

Core-to-Edge-to-Anywhere
Whether your SAN stretches across an enterprise, across a metropolitan area, or across the globe, the FC/9000 offers the port capacity, bandwidth, and extensibility required for such data intensive, anytime, anywhere applications as data mining, clustering, shared storage, and file backup. The Extended Credit Addressing Facility (XCAFTM) feature provides enhanced memory and intelligence to allow both FICON and Fibre Channel switching in the same director, on the same blade, on adjacent ports. XCAF also enables every port to support distances to 100 km with greater overall network performance and bandwidth. For applications beyond 100 km, INRANGE's DWDM, TDM, and channel extension solutions can transport your SAN over metropolitan and wide area networks, enabling you to go the distance for disaster recovery operations and the distribution of critical data.

The FC/9000 is the first storage-networking director certified by Cisco for interoperability with their 5400 series iSCSI (storage over IP) routers. This powerful combination of the IN-VSN Core-to-Edge-to-Anywhere strategy and solution set delivers unmatched industry flexibility and

extensibility.

Interoperability
We are committed to interoperability. The FC/9000 is SANmark (E_port and FC-SW2) certified by the Fibre Channel Industry Association (FCIA), and INRANGE is an active member of the Storage Networking Industry Association's (SNIA) Supported Solutions Forum (SSF). We have an "army" of FC/9000s dedicated to interoperability and partner testing in the INRANGE I3 Labs, as well as at the SNIA interoperability center and many other locations around the world.

Features of the FC/9000 Storage Networking Director
(Industry Leading Scalability from 24 to 256 Ports)

- Fully compliant with ANSI Fibre Channel standards and supports all industry initiatives, including FCIA SANMark.
- Supports intermix of FICON (OS/390) and FCP (open systems) in the same chassis and on the same blade (adjacent ports).
- Supports intermix of 1 Gbps and 2 Gbps blades in the same chassis without forcing 2 Gb blades to 1 Gb.
- High availability, fully redundant internal pathing, power, cooling, and control for no single point of failure (all front-accessible).
- Non-disruptive code loads and activation.
- Intermix and hot swappable GBICs (copper, optical) and SFP (LC connectors) for industry leading media flexibility and investment protection.
- Supports FICON switching (FICON Cascading), FICON CUP (host control and statistics), and FICON port swapping.
- Enhanced memory and intelligence (buffer credits) allows each port to extend distance to beyond 100km.
- Auto-discovering, self-configuring ports (1 Gb and 2 Gb): arbitrated loop (FL), point-to-point (F) or switch-to-switch (E).
- Enterprise Manager SAN fabric management system with network based clients and Telnet interface for diagnostic and performance monitoring.
- User assigned throughput threshold (MBps) for performance alerts.
- Flexible industry standard zoning, including world wide name zones and zone sets, hardware based port prohibits and access control lists (ACLs), soft zoning, and broadcast zoning.
- Saving and restoring of multiple zone sets. In addition, intelligent zoning wizards employ "orphan"

zoning to guard against losing ports not proactively assigned to a defined zone.
- Phone home and pager direct dial feature for automated notification.
- SNMP IETF and Fibre Alliance MIBS (Planned CIM support), ClearVSN SN-API interfaces to IBM Tivoli, Veritas, SANpoint Control, BMC, InterSAN, and many others.
- INRANGE developed and designed "chips" for optimal performance and 1 Gb and 2 Gb intermix with Class 2 and 3 support.
- Low latency; less than 2.75 µsec (micro-seconds) across all ports up to 256.
- Support of multiple topologies including: switched (cascade, mesh, tiered, ring, core/edge), loop (both public and private), and point-to-point.
- Advanced security features including *High Integrity Fabric* which allows only authorized directors to join the fabric.

Applications

- Enterprise storage area networks
- Bandwidth intensive applications
- Large databases and data warehouses
- Storage backup systems and recovery
- Server clusters and consolidations
- Network based storage
- High-performance workgroups
- Campus backbones
- Parallel processing
- Distributed computing
- Distributed database processing

Solutions

- FICON Storage
- FICON Tape
- Storage Consolidation

SWITCHES

MANAGEMENT

F

FC/9000 Multi-Protocol Storage Networking Director

CNT®

■ PRODUCT DESCRIPTION

Simplify Storage Management with Scalable and Extensible SAN Technology

- Freedom of choice by intermixing technology
- Unprecedented growth through product scalability
- Unparalleled investment protection due to vendor interoperability
- Flexible, centralized command and control
- Core-to-edge-to-anywhere
- Optimize bandwidth utilization via compression

The CNT FC/9000™ Fibre Channel/FICON Director is designed to deliver a powerful platform for enabling a robust, resilient storage infrastructure—an infrastructure that extends across the enterprise whether it's local or global. Combined with the industry's first integrated MAN/WAN extension capabilities, the FC/9000 provides IT professionals with the most scalable technology for controlling server/storage connectivity and simplifying enterprise SAN management.

Fibre Channel/FICON directors are at the heart of applications spanning local, metropolitan, and wide area environments. The FC/9000 delivers the speed, reliability, and high availability required for a 24x7x365 world. For enterprises with little or no tolerance for down time, the FC/9000 delivers 99.999% ("five 9's") availability, and is the only scalable storage director to offer simultaneous Fibre Channel and FICON connectivity, even on the same blade.

With the ability to support multiple protocols, interfaces, operating systems, management platforms and topologies, the FC/9000's 256-port capacity delivers a large, centralized core eliminating the disruptions, management complexity, and reduced performance of a network based on multiple smaller directors.

Applications

Offering seamless growth, the FC/9000 can be used as the backbone or core of a high-speed SAN. Whether your SAN stretches across your enterprise, across a metropolitan area, or across the globe, the FC/9000 offers the port capacity, bandwidth, and extensibility required for data intensive, anytime, anywhere applications:

- Support for backup and recovery to enable cost-effective business continuity. Quickly and efficiently restore lost data in the event of a disaster, significantly cutting recovery time.
- Data and resource sharing to provide availability to crucial data remotely, when and where you need it, helping to drive business efficiency.
- Shared storage enabling better storage utilization, since more servers are able to utilize more bandwidth in order to access more storage.
- Data mining and data imaging, which require the reliable transfer of huge amounts of information.
- Clustering to enable continuous, reliable operation and to provide fault tolerance.
- Storage consolidation, providing any-to-any connectivity and better resource utilization, managed growth, and reduced storage hardware requirements.
- E-commerce applications with critical demand for continual uptime, where minutes of downtime can cost companies thousands, even millions of dollars.

Supporting the full range of FC/9000 solutions is CNT's Enterprise Manager software, a dynamic application for the centralized monitoring and management of your SAN configuration, application, and performance.

Benefits

Freedom of choice by intermixing technology

The ability to intermix 1 and 2 Gbps devices within the same director, and both FICON and Fibre Channel switching in the same director, on the same blade on adjacent ports, gives you flexibility and investment protection as you change and scale your storage network.

Unprecedented growth through product scalability

Scalable from 16 to 256 full bandwidth Fibre Channel or FICON ports, with in-place upgrades and expansion without interrupting SAN operation or compromising performance. With the FC/9000 as a platform for seamless growth you will have unprecedented scalability that supports rapid expansion without interrupting SAN operation or compromising performance. Grow your network when and how you need to.

Unparalleled investment protection due to vendor interoperability

Ability to scale on-line and interoperate with other vendors' switches. In-place upgrades of existing technology and freedom from interface, operating system, protocol, management software, and topology constraints provide added flexibility, allowing you to optimize your current IT infrastructure investments while you scale your SAN as you need to.

Mission-critical design

An enterprise-class director with the full reliability, availability, and serviceability (RAS) features that are essential for use in high-availability applications and for supporting mission-critical environments.

Flexible, centralized command and control

Single point of control for managing and monitoring storage network resources. Command is also made accessible to partners' storage management platforms for your choice of best-of-breed storage management platforms.

Core-to-edge-to-anywhere

Coupled with CNT's extension technologies, the FC/9000 delivers the port capacity, bandwidth, and extensibility to enable your storage network to span your enterprise, across a metropolitan area, or across the globe.

Optimize bandwidth utilization via compression

CNT's FC/9000 compression ratios (between 2:1 and 20:1) can more than double the capacity of existing bandwidth and delay investments in additional infrastructure. In addition, you can reduce total cost of ownership, optimize current resources, and avoid additional investment by leveraging your existing network capacity and resources.

Product Capabilities

The FC/9000 is the industry's most scalable data center-class Fibre Channel and FICON storage networking director, providing customers with any-to-any, full bandwidth port connectivity as they scale. For enterprises with little or no tolerance for down time, the FC/9000 delivers the critical features required for a 24x7x365 world.

An enterprise storage networking director gives you maximum flexibility and investment protection. One of the key imperatives for enterprises today is the ability to support multiple protocols, interfaces, operating systems, management platforms, and topologies. The FC/9000 gives you that ability, enabling you to maximize your IT investments while you scale your SAN.

Optimized performance

The FC/9000's unique extensible core architecture (XCA™) enables it to seamlessly scale from 16 to 256 Fibre Channel or FICON ports within a single director, with support for open systems (FCP) and FICON (OS/390) environments. This architecture reduces bottlenecks caused by performance limitations and proprietary trunking of smaller directors and switches, and gives you ultimate flexibility and optimum performance.

A centralized SAN management application provides a single point of control for managing and monitoring your storage network resources, making it easy to configure and monitor the entire SAN, maximizing efficiency and minimizing management costs.

Multi-protocol support

Along with supporting the intermix of 1 and 2 Gbps devices, the FC/9000 enables the switching or sharing of Fibre Channel as well as FICON channels and storage units, supporting all of FICON's advantages of more granularity in accessing storage, a higher transfer speed, and full duplex operation.

Unique advanced architecture

On the strength of its XCA architecture, the FC/9000 supports up to 256 full bandwidth Fibre Channel/FICON ports without the need for interswitch links (ISLs) or proprietary trunking. It can also be networked with other switches and directors to create large global fabrics of thousands of ports. Delivering full gigabit-per-second bandwidth and industry-low latency levels for all configuration sizes, the FC/9000 ensures consistent performance throughout the SAN as usage grows.

WAN module for extension

Providing infrastructure flexibility and extensibility, the WAN module architecture ensures predictable throughput, efficient bandwidth utilization, and data integrity-across any distance, enabling you to meet changing business needs and achieve improved data availability for business continuity.

MAN module for optical networking

CNT's MAN module—the industry's first metropolitan area optical networking blade for a Fibre Channel/FICON storage director—ushers in a new era of integrated switching and distance, enabling optical technology on a single blade. MAN delivers a flexible, cost-effective FC trunking solution for multiplexing storage and net-

working applications, expanding their reach and density.

Providing passive SAN-over-optical connectivity, MAN optimizes investment in your fiber optic network by leveraging your current infrastructure, increasing the capacity of existing fibers, reducing the amount of fiber necessary to transport a quantity of FC circuits over distance, and therefore reducing TCO. MAN improves network flexibility by extending selected Fibre Channel devices.

Enhanced distance support for 1 and 2 Gbps applications to support:

- Disaster recovery, business continuance, regulatory compliance
- Off-site tape backup/recovery and electronic tape vaulting
- Server, storage, and data center consolidation
- Open systems and FICON Cascade for metropolitan SANs

Integrated SAN/MAN/WAN solution for remote storage networks
Integrating its highly scalable switching and industry-leading and WAN extension technologies into the FC/9000, CNT offers the industry's first and only integrated SAN/MAN/WAN solution.

The WAN and MAN modules available with the FC/9000 enable the extension of Fibre Channel and FICON environments over metropolitan distances using dark fiber, and across wide area distances utilizing existing IP, ATM, or SONET network infrastructures. Without taking up valuable FC/9000 chassis I/O space, this solution reduces infrastructure complexity by decreasing the number of standalone components, and simplifies the management of remote storage networks to lower management costs.

Manage and monitor performance
The FC/9000's network management system is open and flexible. Administrators can view and manage the storage fabric through the powerful Java-based Enterprise Manager application, as well as through industry-standard SNMP communications. The FC/9000 can also interoperate with industry-leading enterprise management suites from BMC, InterSAN, Tivoli, and VERITAS.

Open, flexible management
CNT's Storage Networking Application Program Interface (SN-API) allows our partners access to monitoring, configuration, and detailed performance data. SN-API will empower them to offer you an even richer foundation for designing highly available, centrally controlled storage networks.

The FC/9000 is enhanced by CNT's Advanced Storage Networking Services (ASNS), a comprehensive solution consisting of layered hardware and intelligent software services that simplifies data management and supports storage networks that extend from the core-to-edge-to-anywhere. ASNS consists of four feature sets: PerformanceVSN, ExtendedVSN, SecureVSN, and ClearVSN. These feature sets enhance the visibility, extensibility, security, and control of the FC/9000 and your entire storage network.

FC/9000 Cable Management System
The FC/9000 cable management system is a custom-designed fiber optic cable management system for the FC/9000 that eliminates the need to install individual fiber optic cables in the field. Fiber cable harnesses connect each port on the FC/9000 to a panel at the bottom of the FC/9000 cabinet—simply connect your fiber trunk to this panel, making installation quick and easy.

This integrated custom fiber management solution simplifies expansion of the system. Available as a factory- or field-installed option, it requires no power and is protocol transparent.

Standards and Interoperability

We are committed to interoperability. The FC/9000 is SANmark (E_port and FC-SW2) certified by the Fibre Channel Industry Association (FCIA), and CNT is an active member of the Storage Networking Industry Association's (SNIA) Supported Solutions Forum (SSF). We have an "army" of FC/9000s dedicated to interoperability and partner testing in the CNT I3 Labs, as well as at the SNIA interoperability center and many other locations around the world.

Support Services

All CNT products are supported by our 24x7x365 help desk and remote dial-in support with web access to documentation and software upgrades. In addition, on-site hardware support and depot spares are available on some models. You can choose to engage CNT experts for Change Management Services to provide expert guidance for network configuration changes.

CNT's Network Management Service provides a secure architecture for proactive remote network monitoring and management of your storage network. This service resolves events related to your CNT network, including hardware, WAN and LAN circuits, and the channel. Access to daily reports and trend analysis information is available via a secure web portal for better-informed network decisions. If you choose to have CNT provision your bandwidth, we'll monitor, respond to, and troubleshoot Telco-related issues as well.

For more information about the FC/9000 storage networking director and CNT services consult your sales representative or refer to our web site at www.cnt.com.